

The Indiana Quarantine for Thousand Cankers Disease (TCD) Of Black Walnut Trees

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The Indiana Department of Natural Resources issued a quarantine order on August 30, 2010, to prevent the introduction of Thousand Cankers Disease (TCD) of walnut trees into Indiana.

Walnut Trees in Indiana Landscapes

Walnut trees are among Indiana's most valuable timber trees; they are important in the state's urban landscapes and native ecosystems. Indiana ranks third in production of walnut timber in the United States. **As of March 2011, TCD has not been found in Indiana;** the TCD quarantine will help keep this destructive disease out of the state.

Basic Information about TCD



A TCD canker on black walnut

Thousand cankers disease results when an insect and a fungal pathogen interact. The spores of the **fungus** *Geosmithia morbida* are carried on the **walnut twig beetle** (*Pityophthorus juglandis*). As the beetle burrows into a branch on a walnut tree to feed, it infects the tree tissue with the pathogen.

The fungal infection causes small, black lesions called **cankers** to form where the beetle entered the tree. Thousands of beetles at a time may feed in a single tree, which delivers an enormous dose of the pathogen.

Eventually the edges of the cankers blend into each other, preventing the flow of vital nutrients throughout the tree. Trees infected with TCD exhibit symptoms of **general decline** such as of the presence of **yellowing, wilted leaves** and **dieback of branches** in the crown. The tree often succumbs to TCD within 3-5 years after symptoms first appear. Identifying TCD before signs of tree decline appear is difficult.



Steve Valley, OR Dept of Ag

Walnut Twig Beetle

The **walnut twig beetle**, native to the southeastern United States, is a tiny yellowish-brown beetle about the size of a mustard seed (1-2 mm long). All species of walnut trees (*Juglans*) are susceptible to TCD with black walnut (*J. nigra*) appearing to be the most susceptible.

How Does the TCD Quarantine Work?

Under the TCD quarantine, regulated walnut materials originating in, or transiting through, a quarantined state are prohibited from being brought into Indiana.

Regulated articles include:

- All types of hardwood firewood
- Walnut nursery stock, budwood, and scion wood
- Walnut logs, lumber, chips, and mulch
- The fungus *Geosmithia morbida*
- The walnut twig beetle, *Pityophthorus juglandis*

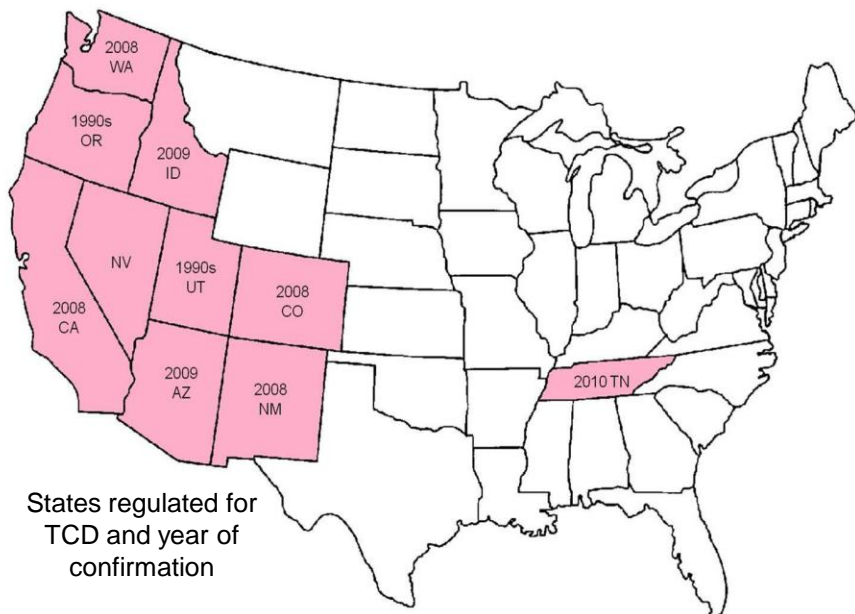


Firewood

Walnut items *exempt* from the quarantine include:

- Nuts, nut meat, and hulls
- Kiln dried lumber that has 100 % squared edges and is 100% bark free
- Finished wood products without bark attached such as furniture, instruments, and gun stocks

Regulated articles may be brought into Indiana if the state of origin provides a **state-issued phytosanitary certificate** indicating the county of origin of the article and the items are free of TCD. Notification must be given at least 24 hours before the item(s) are transported into Indiana. In addition, the importer must have a **compliance agreement issued by the Indiana DNR**. The shipment must also be re-inspected by the DNR once it arrives in Indiana .



Black walnut trees exhibiting symptoms of decline from TCD.

How to Report a Suspected Find of TCD in Indiana

If you wish to report a suspected find of TCD in Indiana, notify the Indiana Department of Natural Resources, Division of Entomology and Plant Pathology, by calling **1-866- NO EXOTIC (1-866-663-9684)** or by sending an email to **depp@dnr.on.gov**. Please include your contact information, a description of the symptoms you have observed, and the location of the suspect tree.

Updates on Indiana's Thousand Cankers Disease Quarantine

To read the entire quarantine document and for updated information on TCD in Indiana, visit: <http://www.in.gov/dnr/entomolo/6249.htm>

More information on TCD

More information about TCD is located at the following websites:

- Indiana Department of Natural Resources: <http://www.in.gov/dnr/entomolo/6249.htm>
- Purdue Plant Pathology: <http://www.ppdl.purdue.edu/ppdl/hot10/8-23.html>
- USDA Thousand Cankers Disease Pest Alert: http://na.fs.fed.us/pubs/palerts/cankers_disease/thousand_cankers_disease_low_res.pdf
- The Walnut Council: <http://www.walnutcouncil.org/>